PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
GORNALL, PAUL D.
The Marine Building
1820 - 355 Burrard Street
VANCOUVER, British Columbia
Canada, V6C 2G8

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(date/month/year)* 23 February 2005 (23-02-2005)

Applicant's or agent's file reference	FOR FURTHER ACTION See paragraph 2 below	
International application No PCT/CA2004/001541	International filing date *(date/month/year)* 30 August 2004 (30-08-2004)	Priority date *(date/month/year)* 28 August 2003 (28-08-2003)
International Patent Classification (IPC) or both national classification and IPC H04N-7/18; G03B-15/03; F21V-33/00		
Applicant GIN, JACK		

1. This opinion contains indications relating to the following items :

[X]	Box No. I	Basis of the opinion
[ ]	Box No. II	Priority
[ ]	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
[ ]	Box No. IV	Lack of unity of invention
[X]	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
[ ]	Box No. VI	Certain documents cited
[ ]	Box No. VII	Certain defects in the international application
[X]	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**
If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.
For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/	Authorized officer
Commissioner of Patents *Canadian Patent Office* *Box PCT, Ottawa/Gatineau K1A 0C9* Facsimile No. (819) 953-9538	Terry Cartile (819) 997-2951

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CA2004/001541

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language which it was filed, unless otherwise indicated under this item.

[ ] This opinion has been established on the basis of a translation from the original language into the following language __ , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of :

a. type of material

[ ] a sequence listing

[ ] table(s) related to the sequence listing

b. format of material

[ ] in written format

[ ] in computer readable from

c. time of filing/furnishing

[ ] contained in the international application as filed.

[ ] filed together with the international application in computer readable form.

[ ] furnished subsequently to this Authority for the purposes of search.

3. [ ] In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments :

Box No. V reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-15	YES
	Claims	None	NO
Inventive step (IS)	Claims	6, 10, 12, 15	YES
	Claims	1-5, 7-9, 11, 13-14	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims	None	NO

2. Citations and explanations :

The following documents have been considered for the purposes of the search report :

D1: WO 02/073535
D2: US 6550949
D3: CA 2295257

D1 discloses an imaging device which is trained (ie.. panned, zoomed, focused) on environmental navigation features, such as street sign or house number, by operator input and computer control, and displays the resulting image on a monitor. Optical illumination in visible, infrared, ultraviolet, or other spectra enhances imaging, especially during nighttime. The camera features an optically configurable lens, and multiple illumination sources used to enhance the performance of the included electronic imaging subsystem. Optional processing is applied to the image to increase brightness, sharpness and/or size, and/or if counter positional or other distortion errors occur. Computer controlled motion tracking, affected by pattern recognition algorithms with optional artificial intelligence, and/or freeze frame functions, and/or optical or digital image stabilization, are used to stabilize the view from a moving vehicle.

D2 discloses a vehicle system which includes a vehicle lamp assembly, including a plurality of LEDs that emit white light, so as to function as an illuminator light. The lamp assembly also may include a plurality of LEDs that emit colored light, such as red or red-orange, so as to function as a signal light. The lamp assembly may also include a camera of a vehicle imaging system. The lamp assembly may serve as a center high-mounted stop light, or as a tail light. The system also includes a controller that rapidly pulses the LEDs on and off at a rate that is imperceivable by the human eye. The pulsing intervals of the LEDs may be related to the readout intervals of the camera sensor array. In this manner, the LEDs may be pulsed on during camera readout, so as to increase their intensity while the camera is capturing an image, or pulsed off during camera readout to prevent feedback glare from interfering with image capture by a highly sensitive image sensor array of the camera.

D3 discloses a lighting system which includes an illumination source arranged within a housing, wherein the housing is positioned at a front end portion of a shelf of a product display unit. In a preferred form of the invention, thermal insulation is disposed between the housing and the shelf such that the shelf is thermally isolated from heat generated by the lighting unit. The lighting unit can be attached to or formed integral with the front portion of the shelf, so as to act as an extension thereof, or arranged beneath the shelf, preferably with an air gap or other type of thermal material barrier therebetween. The lighting unit takes the form of an elongated housing, which is slidably mounted within a label receiving area of a shelf.

NOVELTY :

Claims 1-15 meet the requirements of PCT Article 33(2). The closest document in the art, D1, does not explicitly contain all of the elements of these claims.

Continued in the Supplemental Box ...

Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made :

PCT Article 6

Claims 1-2 do not meet the requirements of PCT Article 6. The naming convention used for the two cameras and two illuminators is confusing. Claim 1 states that the system contains ...

> *"a first compartment having a first translucent viewing pane and containing the first camera and the second illuminator"* and ..
>
> *"a second compartment having a second translucent viewing pane and containing the second camera and the first illuminator".*

Then, claim 2 states that ..

> *"the first camera records images when the second illuminator is turned on, the second camera records images when the first illuminator is turned on"*

Combining claims 1 and 2, it appears that, when an illuminator in a given compartment is turned on, the camera in the same compartment (ie.. the first camera and the second illuminator, both in the first compartment) records images. If this is true, then what is the reason for the confusing naming convention (ie.. the first camera and the second illuminator)?

It is more likely from the description that claim 2 should read ..

> *"the first camera records images when the first illuminator is turned on, the second camera records images when the second illuminator is turned on",*

since illumination from an illuminator in the same compartment as the active camera may reflect off the compartment's translucent pane and back to the camera, interfering with proper camera imaging. This is supported in that the stated function of the opaque barrier between compartments is to prevent light from one compartment from reflecting off of the translucent pane in the other compartment.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of : **Box No. 5**

INVENTIVE STEP :

Claims 1-5, 7-9, 11 and 13-14 lack an Inventive Step, under PCT Article 33(3).

Claim 1 defines a dual surveillance camera system, comprising two cameras, two illuminators, and two separate compartments which each have a translucent viewing pane. The compartments each contain one camera and one illuminator, and are separated from each other by an opaque wall which prevents light from each illuminator from reflecting off the viewing pane directly to the camera in the other compartment. Each of the cameras is adapted to operate under a different type of illumination than the other camera.

The closest prior art, D1, describes an imaging system comprising one camera and multiple lenses, which is intended to operate with multiple types of illumination, such as visible, infrared and ultraviolet light. Each lens is coupled with its own illuminator. As seen in figure 11A, each lens-illuminator subsystem, or "lightguide", is designed so that the light of the illuminator is directed in a manner surrounding the lens, but away from the translucent viewing pane in front of the lens; this is accomplished by applying a coating to the sides of the lightguide. The coating prevents light from leaking out of the lightguide, and thus also from reflecting off the translucent viewing pane of the lens. As shown in figure 9B, a camera is surrounded by a number of separate lens-illuminators, which can illuminate the scene to be viewed by the camera in any of a number of selected types of illumination. While D1 uses only one camera illuminated by multiple possible different light sources, a skilled technician would consider the use of two cameras illuminated by two different illumination sources, where the camera(s) are shielded from the illumination sources in each case.

D1 also covers the subject matter of claims 2-3, 8-9 and 11, as D1 discusses the use of filters on the illumination sources, and includes infrared illumination. D1 and D2 also cover the use of miniaturized compartments for the system components, as in claim 7, as the D1 and D2 systems are designed to be used on automobile lighting systems.

The material in claim 4, for separating the illumination sources from the camera by an opaque wall, in addition to this function illustrated by the protective coating in D1, document D2 demonstrates this feature as well. On figures 12-14 of D2, groups of colored LEDs are shown, separated by baffles from each other, and from the imaging camera, in order to prevent different lighting sources from interfering with each other.

The heat-sink in claim 5 is a well known means of carrying off heat from lighting systems, as illustrated by D3, which uses conductive end caps attached to a lighting housing to uses the attached cabinet as a heat sink, drawing heat away from shelving containing products which may otherwise be negatively affected by the heat. This is analogous to using the present surveillance cabinet as a heat sink to draw heat away from the cameras contained within.

The material in claims 13-14 is illustrated by the combination of D1 and D3.

INDUSTRIAL APPLICABILITY :

Claims 1-15 fulfill the requirements of Industrial Applicability, under PCT Article 33(4).